



INDUSTRIAL BLUETOOTH™



## Serial Cable Replacement

*- now with Bluetooth 2.0!*

The Serial Cable Replacement products from connectBlue provide a ready-to-use solution to replace any serial cable connections in your product. They enable any Bluetooth device (for example laptop, PDA, or Mobile phone) to connect to your device for configuration, and data communication independent of the serial protocol used.

The SERIAL PORT ADAPTER works like a serial cable and is developed for reliable, high demanding industrial products/applications.

The SERIAL PORT ADAPTER is small and cost effective without renounce on performance and quality. connectBlue provides a state-of-the-art range of versions to cover any requirement or need. The products are fully Bluetooth Qualified, Type Approved, and EMC certified, and no further certifications are needed when integrating the OEM module in a device.

### Key Features and Benefits

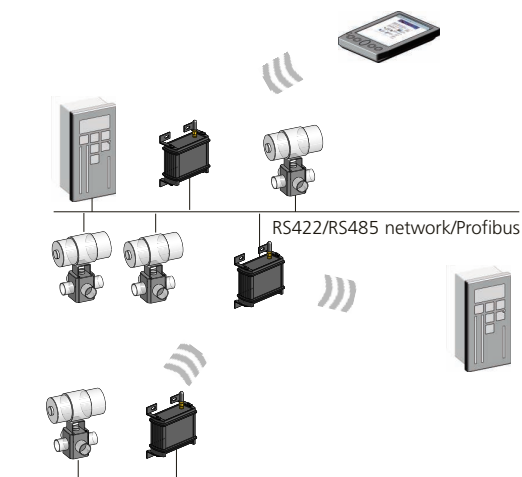
- Wide range of products
- Future proof - field upgradable
- Backward compatible (form, fit and function)
- Range of features - the SPA fits in any applications
- Supports AT command configuration - ease of use
- Embedded Communication Interface (ECI) for advanced multipoint configuration
- Developed for industrial use - high reliability, industrial temperature range, odd baudrates, and special features
- Bluetooth 2.0

*connectBlue*

# Serial Port Adapter™ - Features

## WIRELESS MULTIDROP™ - MULTIPOINT

This feature allows the Serial Port Adapter to simultaneously communicate with up to 7 remote Bluetooth devices depending on application and use cases. The Serial Port Adapter automatically forms a wireless multidrop network and distributes all data to all connected devices. No extra software is required in your system.

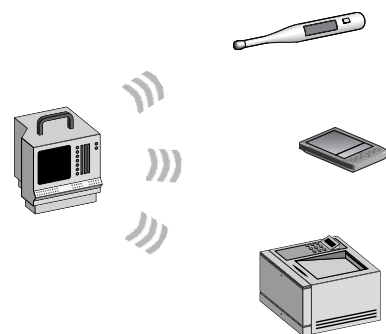


## RS422/RS485 OR PROFIBUS

Industrial multidrop installations use RS422/RS485 or Profibus. The Serial Port Adapter supports both standard and unique baud rates used in for example Profibus networks.

## ADVANCED MULTIPOINT

The Serial Port Adapter supports a unique feature to be used in an advanced multipoint network. The Embedded Communication Interface (ECI) enables the SPA to connect to multiple devices and simultaneously communicate to each of them individually. This use case requires integration of the ECI protocol in the host system (product) and is provided by the Bluetooth Enabler Development Kit.



## WLAN CO-LOCATION

The Serial Port Adapter provides features to enable both WLAN and Bluetooth to be integrated into the same device. The Packet Traffic Arbitration mechanism, proposed by IEEE 802.25.2, makes the two exchange information when transmitting simultaneously and thus reducing risk for interference.

## WLAN CO-EXISTENCE

Some of the products support Bluetooth 2.0, including Adaptive Frequency Hopping (AFH) for improved co-existence with other 2.4 GHz radio systems like 802.11b/g.

## CONFIGURATION

The Serial Port Adapter can be configured using three different methods:

- Using the Windows based configuration wizard to configure a Serial Port Adapter connected to your PC locally or via Bluetooth
- Using a complete set of AT commands
- Using a complete set of advanced ECI commands

## SECURITY

The Serial Port Adapter supports Bluetooth authentication and encryption.

- Authentication, a PIN code is used to block unauthorized access to your device.
- Encryption, data sent over the air is encrypted to prevent eaves dropping.

## POWER CONSUMPTION

When integrating the OEM Serial Port Adapter into a portable device, low power consumption is crucial. The Serial Port Adapters can be configured to consume as little power as possible in any given situation and support efficient power save modes. When permanently powered the Serial Port Adapters can be configured for best performance.

## PERFORMANCE AND STABILITY

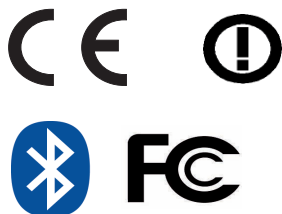
The Serial Port Adapter supports standard and unique baud rates up to 921.6k baud and delivers high throughput and very short response times. It has been designed with high requirements on stability and tested against a wide range of other Bluetooth products, including PDAs, PCs and mobile phones.

## BLUETOOTH ENABLER DEVELOPMENT KIT

By using the Bluetooth Enabler Development Kit (SDK), you fully utilize and control the entire Bluetooth wireless technology embraced in some of the Serial Port Adapters. The Serial Port Adapter together with the SDK allows your product to use all the Bluetooth functions using as little development time as possible. There is no need for qualification of your developed application since the structure of the SDK always guarantees that your application is qualified according to Bluetooth specification 1.1, or 2.0.

## HIGH QUALITY

All Serial Port Adapters are designed and produced with the respect to high quality demands for professional use.



### BLUETOOTH QUALIFICATION AND TYPE APPROVAL

All connectBlue Serial Port Adapters are fully Bluetooth qualified and type approved for use in Europe and the US. When using the Serial Port Adapters from connectBlue you are not required to perform any tests for neither Bluetooth qualification nor type approval.



## Technical variations

### SHORT RANGE & LONG RANGE

connectBlue offers a wide range of different Serial Port Adapters, where some variants use a 0dBm radio, short range, while others use a 20dBm radio, long range. The 0dBm variants allow you to communicate up to 10-30 meters while the 20dBm variants allow you to communicate up to more than 100 meters.

### OEM VERSION OR DIFFERENT HOUSINGS

The Serial Port Adapters from connectBlue are available in different mechanical form factors and with different connector options. In addition to the OEM Serial Port Adapter, the Serial Port Adapters are also available with a plastic housing and a rugged, IP65, aluminum housing making it suitable for harsh environments.

### ANTENNA ALTERNATIVES

The Serial Port Adapters are available with different standard antennas:

- Internal antenna when mounting the OEM Serial Port Adapter in a plastic housing.
- Stub antennas when mounting the OEM Serial Port Adapter in a metallic housing, where the stub antenna can be placed on the outside of the housing.
- Antennas on a cable. The antenna cable can be up to 3m long and is used when mounting any of the Serial Port Adapters in a metal cabinet.

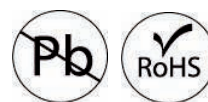


### CONNECTION OPTIONS

The OEM version of the Serial Port Adapter provides a range of interface options. Soldering, board to board connector and a range of wired connections to match any request.

### FUTURE PROOF

connectBlue's product strategy is to create long term relations to OEM customer integrating the Serial Port Adapter. connectBlue will provide compatible solutions (form, fit and function) for a long period even if Bluetooth develops and component suppliers creates new versions. Added features (improved performance, increased functionality, cost efficiency etc.) will be added to future modules but backward compatibility will ensure that OEM customer don't have to redesign their devices.



DISTRIBUTORS NEAR YOU

# connectBlue

connectBlue AB • Norra Vallgatan 64 3v • SE-211 22 Malmö • Sweden  
Phone +46 40-6307100 • Fax +46 40-237137 • info@connectblue.se • www.connectblue.se

Printed in Sweden. ©2006 connectBlue AB. All rights reserved. All specifications are subject to change without notice.  
BLUETOOTH® is a trademark owned by the Bluetooth SIG Inc. Windows is a registered trademark by Microsoft.